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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,591	09/26/2001	Sam Mazza	42390.P12324	3552

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EXAMINER
OSMAN, RAMY M

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/965,591	MAZZA, SAM
	Examiner	Art Unit	
	Ramy M Osman	2157	

-- The MAILING DATE of this communication appears n the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _26 September 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-38_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-38_ is/are rejected.

7)☒ Claim(s) _9,11,16_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some *   c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claims 9-11, 16 objected to because of the following informalities:

2.   As to claim 10, change 'method of' to 'system of'.

3.   As to claims 9,10 and 11, they are objected to for being exact replicas and for failing to

further limit the subject matter of previous claims 1,3 and 4 respectively. Applicant is required

to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper form.

4.   As to claim 16, in step 'b' put a ';' (semi-colon) at the end of the line. Appropriate

correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

6.   Claim 18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing

to particularly point out and distinctly claim the subject matter which applicant regards as the

invention. The limitation "all received up-to (aru) field" is unclear as to what this field

comprises.

7.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9.   **Claims 1-7,9-12,15-19,27,28,33-36 and 38 rejected under 35 U.S.C. 102(b) as being**

anticipated by Hall (US Patent No 5,890,001).

10.   In reference to claims 1,9 and 12, Hall teaches a group communication protocol system,

and a method comprising: .

a plurality of nodes on a first local area network (LAN), the plurality of nodes logically

divided into at least a first group and a second group (column 1 lines 40-64, column 2 lines 26-

35 and column 3 lines 45-60);

a first token to circulate among members of the first group to cause communications

among the members of the first group to be serialized (column4 lines 35-60 and column 5 lines

30-50);

a second token to circulate among members of the second group to cause

communications among the members of the second group to be serialized independent of the first

group (column 4 lines 35-45 and column 6 lines 5-20).

11.   In reference to claim 2, Hall teaches the system of claim 1, wherein at least one member

of the first group is also a member of the second group (column 3 lines 45-60, column 4 lines 35-

50 and figures 3&5).

12.   In reference to claims 3 and 10, Hall teaches the systems of claims 1 and 9, wherein

ownership of the first token is needed before a node can send a message to the first group

(column 1 lines 10-20, column 2 lines 55-65 and column 3 lines 45-60).

13.   In reference to claims 4 and 11, Hall teaches the systems of claims 1 and 9, wherein the

communication among the members of the first group comprises multicast messages (column 2

lines 30-67).

14.   In reference to claim 5, Hall teaches the system of claim 1, wherein the communication

among the members of the second group comprises broadcast messages (column 2 lines 30-67).

15.   In reference to claims 6 and 15, Hall teaches the system and method of claims 1 and 12,

wherein the first and second tokens include a sequencing mechanism (column 1 lines 40-60 and

column 6 lines 20-67).

16.   In reference to claim 7, Hall teaches the system of claim 1 further comprising one or

more nodes on a second LAN, wherein the one or more nodes on the second LAN are members

of the first group (column 3 lines 45-60, column 4 lines 35-50 and figures 3&5).

17.   In reference to claim 16, Hall teaches the method of claim 15, further comprising:

        a. receiving the first token at a first member of the first group (column 4 lines 35-42 and

column 6 lines 20-35);

        b. incrementing the sequence number (column 6 lines 33-67);

        c. sending a broadcast message to the first group using the sequence number (column 2

lines 30-67);

d. repeating b-c for each message, if any, at the head of one or more message queues of the first member that are destined for the first group or until a specified event has occurred (column 5 lines 29-50 and column 6 lines 33-67); and

e. passing the first token to the next member of the first group (column 4 lines 39-42).

18.   In reference to claims 17,27 and 28, Hall teaches a method and a method of steps comprising:

receiving, at a first member of a first group on a local area network (LAN), a first token associated with the first group from another member of the first group on the LAN (column 4 lines 35-42 and column 6 lines 20-35);

incrementing a sequence number associated with the first token (column 6 lines 33-67);

sending a message to the members of the first group using the sequence number associated with the first token (column 2 lines 30-67 and column 4 lines 39-42);

passing the first token to a next member of the first group on the LAN (column 4 lines 39-42);

receiving, at a member of a second group on the LAN, a second token associated with the second group from another member of the second group on the LAN (column 4 lines 35-42 and column 6 lines 20-35);

incrementing a sequence number associated with the second token;

sending a message to the members of the second group using the sequence number associated with the second token (column 2 lines 30-67 and column 4 lines 39-42); and

passing the second token to a next member of the second group on the LAN (column 4 lines 39-42).

19.   In reference to claim 19, Hall teaches the method of claim 17, wherein the sending a

message to the members of the first group comprises sending a multicast message (column 2

lines 30-67).

20.   In reference to claims 33 and 36, Hall teaches a group communication system and a

method comprising:

        a plurality of nodes on a local area network (LAN) logically divided into a first group and

a second group (column 1 lines 40-64, column 2 lines 26-35 and column 3 lines 45-60);

        a first token means, circulating among members of the first group, for serializing

multicast communications among the members of the first group (column4 lines 35-60 and

column 5 lines 30-50); and

        a second token means, circulating among members of a second group, for serializing

multicast communications among the members of the second group independent of the first

group (column 4 lines 35-45 and column 6 lines 5-20).

21.   In reference to claim 34, Hall teaches the system of claim 33 wherein the first and second

token means include a sequence number (column 67 lines 20-67).

22.   In reference to claims 35 and 38, Hall teaches the system and method of claims 34 and

36, wherein ownership of the first token means is needed before a node can send a message to

the first group (column 1 lines 10-20, column 2 lines 55-65 and column 3 lines 45-60).

Claim Rejections - 35 USC § 103

23.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

24.   Claims 8,13,14,20-26,29-32 and 37 rejected under 35 U.S.C. 103(a) as being

unpatentable over Hall (US Patent No 5,890,001) in view of Minyard (US Patent No

6,553,508).

25.   In reference to claims 8,13 and 14, Hall teaches the system and method of claims 1 and

12 above. Hall fails to explicitly teach wherein the first and second groups comprise replication

groups, each including at least one primary and at least one replica. However, Minyard teaches

communication fabrics with redundant fabrics (replication groups) each with communication

devices, in order to enhance fault tolerance in the network (Summary and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify Hall by making

the first and second groups comprise replication groups, each including at least one primary and

at least one replica as per the teachings of Minyard in order to enhance fault tolerance in the

network.

26.   In reference to claim 20, Hall in view of Maynard teaches a replication group system

comprising:

Hall teaches a first and second group located on a network (column4 lines 35-60, column 5 lines 30-50 and column 6 lines 5-20).

Hall fails to explicitly teach a first replication group located on a local area network (LAN), the first replication group including a first primary entity and a first group of one or more replica entities wherein members of the first replication group are members of a first group; a second replication group located on the LAN, the second replication group including a second primary entity and a second group of one or more replica entities wherein members of the second replication group are members of a second group. However, Minyard teaches communication fabrics with redundant fabrics (replication groups) each with primary and replicated communication groups, which makes redundant fabrics in order to enhance fault tolerance in the network (Summary, column 1 lines 7-10 and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify Hall by making first replication group located on a local area network (LAN), include a first primary entity and a first group of one or more replica entities wherein members of the first replication group are members of a first group; and a second replication group located on the LAN, which includes a second primary entity and a second group of one or more replica entities wherein members of the second replication group are members of a second group as per the teachings of Minyard which makes redundant fabrics in order to enhance fault tolerance in the network.

Hall teaches an intersection between the groups (column 3 lines 45-60, column 4 lines 35-50 and figures 3&5).

Hall also teaches a first token circulating among members of the first group causing communications among the members of the first group to be ordered (column4 lines 35-60 and

column 5 lines 30-50); and a second token circulating among members of the second group

causing communications among the members of the second group to be ordered independent of

the first replication group (column 4 lines 35-45 and column 6 lines 5-20).

27.   In reference to claims 21, Hall teaches the system of claim 20 further comprising:

        a first storage area associated with the intersection, comprising serialized messages for

the first replication group (column 3 lines 45-60, column 4 lines 35-50 and figures 3&5); and

        a second storage area associated with the intersection, comprising serialized messages for

the second replication group (column 3 lines 45-60, column 4 lines 35-50 and figures 3&5).

28.   In reference to claims 22 and 23, Hall teaches the system of claim 20. Hall fails to

explicitly teach wherein at least one replica entity in the intersection operates as a warm or cold

replica for the first primary entity and a warm or cold replica for the second primary entity; and

wherein at least one replica entity in the intersection operates as a hot replica for the first primary

entity and a warm or cold replica for the second primary entity. However, Minyard teaches

communication fabrics with redundant fabrics (replication groups) each with communication

devices, in order to enhance fault tolerance in the network (Summary and column 3 lines 1-25).

        It would have been obvious for one of ordinary skill in the art to modify Hall by making

the first and second groups comprise replication groups, each including at least one primary and

at least one replica as per the teachings of Minyard in order to enhance fault tolerance in the

network.

29.   In reference to claims 24,30 and 31, Hall teaches a method, a system and a machine

readable medium comprising:

receiving, at a first member of a first group on a local area network (LAN), a first token

associated with the first group from another member of the first group on the LAN (column 4

lines 35-42 and column 6 lines 20-35);

receiving, at a member of a second group on the LAN, a second token associated with the

second group from another member of the second group on the LAN (column 4 lines 35-42 and

column 6 lines 20-35);

incrementing a sequence number associated with the first token (column 6 lines 33-67);

incrementing a sequence number associated with the second token (column 6 lines 33-

67);

sending a message to the members of the first group using the sequence number

associated with the first token (column 2 lines 30-67 and column 4 lines 39-42);

sending a message to the members of the second group using the sequence number

associated with the second token (column 2 lines 30-67 and column 4 lines 39-42).

Hall fails to explicitly teach wherein the first and second groups comprise replication

groups, each including at least one primary and at least one replica. However, Minyard teaches

communication fabrics with redundant fabrics (replication groups) each with communication

devices, in order to enhance fault tolerance in the network (Summary and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify Hall by making

the first and second groups comprise replication groups, each including at least one primary and

at least one replica as per the teachings of Minyard in order to enhance fault tolerance in the

network.

30.   In reference to claim 25, Hall teaches the method of claim 24. Hall fails to explicitly

teach wherein the first replication group further comprises a replica entity located on a second

LAN. However, Minyard teaches communication fabrics with redundant fabrics (replication

groups) each with communication devices, in order to enhance fault tolerance in the network

(Summary and column 3 lines 1-25).

It would have been obvious for one of ordinary skill in the art to modify Hall by making

the first and second groups comprise replication groups, each including at least one primary and

at least one replica as per the teachings of Minyard in order to enhance fault tolerance in the

network.

31.   In reference to claims 26,29,32and 37, Hall teaches the method, the system and machine

readable medium of claims 24,27,30,36. However, Hall fails to explicitly teach wherein the first

and second tokens comprise Totem tokens. However, Minyard teaches Totem networks and

tokens since Totem networks provide for multicast delivery of messages.

It would have been obvious for one of ordinary skill in the art to modify Hall wherein the

first and second tokens comprise Totem tokens as per the teachings of Minyard since Totem

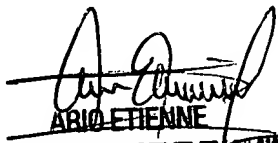networks provide for multicast delivery of messages.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ramy M Osman whose telephone number is (571) 272-4008.

The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RMO
January 4, 2005

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